

t36_ncfcont1

(TMNnyNV5kdhY1xxbjau6U65SvicEzLSm4Da)

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Let $v2_struct.0 : \iota \Rightarrow o$ be given. Let $v13_algstr.0 : \iota \Rightarrow o$ be given. Let $v2_rlvect.1 : \iota \Rightarrow o$ be given. Let $v3_rlvect.1 : \iota \Rightarrow o$ be given. Let $v4_rlvect.1 : \iota \Rightarrow o$ be given. Let $v3_normsp.0 : \iota \Rightarrow o$ be given. Let $v4_normsp.0 : \iota \Rightarrow o$ be given. Let $v2_clvect.1 : \iota \Rightarrow o$ be given. Let $v3_clvect.1 : \iota \Rightarrow o$ be given. Let $v4_clvect.1 : \iota \Rightarrow o$ be given. Let $v5_clvect.1 : \iota \Rightarrow o$ be given. Let $v8_clvect.1 : \iota \Rightarrow o$ be given. Let $l2_clvect.1 : \iota \Rightarrow o$ be given. Let $v5_rlvect.1 : \iota \Rightarrow o$ be given. Let $v6_rlvect.1 : \iota \Rightarrow o$ be given. Let $v7_rlvect.1 : \iota \Rightarrow o$ be given. Let $v8_rlvect.1 : \iota \Rightarrow o$ be given. Let $v2_normsp.1 : \iota \Rightarrow o$ be given. Let $l1_normsp.1 : \iota \Rightarrow o$ be given. Let $v1_funct.1 : \iota \Rightarrow o$ be given. Let $m1_subset.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc.1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct.0 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $r2_ncfcont1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_vfunct.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v3_normsp.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_normsp.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_normsp.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_rlvect.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_relset.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_relset.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_funct.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_funct.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $l1_struct.0 : \iota \Rightarrow o$ be given. Let $v1_xboole.0 : \iota \Rightarrow o$ be given. Let $l2_struct.0 : \iota \Rightarrow o$ be given. Let $l2_normsp.0 : \iota \Rightarrow o$ be given. Let $l1_normsp.0 : \iota \Rightarrow o$ be given. Let $l1_clvect.1 : \iota \Rightarrow o$ be given. Let $l1_rlvect.1 : \iota \Rightarrow o$ be given. Let $v1_relat.1 : \iota \Rightarrow o$ be given. Let $v5_relat.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v9_clvect.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_clvect.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given.

Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.((\neg v2_struct_0 \\
& X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge \\
& ((v4_rlvect_1 X1) \wedge ((v5_rlvect_1 X1) \wedge ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 \\
& X1) \wedge ((v8_rlvect_1 X1) \wedge ((v3_normsp_0 X1) \wedge ((v4_normsp_0 X1) \wedge \\
& ((v2_normsp_1 X1) \wedge (l1_normsp_1 X1)))))))))) \Rightarrow (\forall X2. \\
& ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers (u1_struct_0 X1)) \wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 \\
& X1)))))) \Rightarrow ((v3_normsp_1 X2 X1) \Rightarrow (k6_normsp_1 X1 (k5_normsp_1 X1 \\
& X2 X0) = k1_rlvect_1 X1 (k6_normsp_1 X1 X2) X0)))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v3_normsp_0 X0) \wedge \\
& ((v4_normsp_0 X0) \wedge ((v2_clvect_1 X0) \wedge ((v3_clvect_1 X0) \wedge ((v4_clvect_1 \\
& X0) \wedge ((v5_clvect_1 X0) \wedge ((v8_clvect_1 X0) \wedge (l2_clvect_1 X0)))))))))) \Rightarrow \\
& (\forall X1.((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 \\
& X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v5_rlvect_1 X1) \wedge \\
& ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 X1) \wedge ((v8_rlvect_1 X1) \wedge ((v3_normsp_0 \\
& X1) \wedge ((v4_normsp_0 X1) \wedge ((v2_normsp_1 X1) \wedge (l1_normsp_1 X1)))))))))) \Rightarrow \\
& (\forall X2.((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow (\forall X3.((v1_funct_1 \\
& X3) \wedge ((v1_funct_2 X3 k5_numbers (u1_struct_0 X0)) \wedge (m1_subset_1 \\
& X3 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \Rightarrow \\
& (\forall X4.(m1_subset_1 X4 k1_numbers) \Rightarrow ((r1_tarski (k2_relset_1 \\
& (u1_struct_0 X0) X3) (k1_relset_1 (u1_struct_0 X0) X2)) \Rightarrow (r2_funct_2 \\
& k5_numbers (u1_struct_0 X1) (k8_funct_2 k5_numbers (u1_struct_0 \\
& X1) (u1_struct_0 X0) X3 (k4_vfunct_1 (u1_struct_0 X0) X1 X2 X4)) \\
& (k5_normsp_1 X1 (k8_funct_2 k5_numbers (u1_struct_0 X1) (u1_struct_0 \\
& X0) X3 X2) X4))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.((\neg v2_struct_0 \\
& X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge \\
& ((v4_rlvect_1 X1) \wedge ((v5_rlvect_1 X1) \wedge ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 \\
& X1) \wedge ((v8_rlvect_1 X1) \wedge ((v3_normsp_0 X1) \wedge ((v4_normsp_0 X1) \wedge \\
& ((v2_normsp_1 X1) \wedge (l1_normsp_1 X1)))))))))) \Rightarrow (\forall X2. \\
& ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers (u1_struct_0 X1)) \wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 \\
& X1)))))) \Rightarrow ((v3_normsp_1 X2 X1) \Rightarrow (v3_normsp_1 (k5_normsp_1 X1 X2 \\
& X0) X1)))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((v1_funct_1 X2)\wedge \\ & ((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))))\wedge((v1_funct_1 X3)\wedge((v1_funct_2 X3 X0 X1)\wedge(m1_subset_1 \\ & X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))))\Rightarrow((r2_funct_2 X0 X1 X2 \\ & X3)\Leftrightarrow(X2 = X3)) \end{aligned} \quad (4)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (5)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_struct_0 X0))\Rightarrow(\neg v1_xboole_0 (u1_struct_0 X0)) \quad (6)$$

Assume the following.

$$\forall X0.(l2_struct_0 X0)\Rightarrow(l1_struct_0 X0) \quad (7)$$

Assume the following.

$$\forall X0.(l2_normsp_0 X0)\Rightarrow((l1_normsp_0 X0)\wedge(l2_struct_0 X0)) \quad (8)$$

Assume the following.

$$\forall X0.(l2_clvect_1 X0)\Rightarrow((l1_clvect_1 X0)\wedge(l2_normsp_0 X0)) \quad (9)$$

Assume the following.

$$\forall X0.(l1_normsp_1 X0)\Rightarrow((l1_rlvect_1 X0)\wedge(l2_normsp_0 X0)) \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((\neg v1_xboole_0 \\ & X2)\wedge(((v1_funct_1 X3)\wedge((v1_funct_2 X3 X0 X2)\wedge(m1_subset_1 X3 \\ & (k1_zfmisc_1 (k2_zfmisc_1 X0 X2)))))\wedge((v1_relat_1 X4)\wedge((v5_relat_1 \\ & X4 X1)\wedge(v1_funct_1 X4))))\Rightarrow((v1_funct_1 (k8_funct_2 X0 X1 X2 X3 \\ & X4)\wedge((v1_funct_2 (k8_funct_2 X0 X1 X2 X3 X4) X0 X1)\wedge(m1_subset_1 \\ & (k8_funct_2 X0 X1 X2 X3 X4) (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge(l1_rlvect_1 \\ & X0))\wedge(((v1_funct_1 X1)\wedge((v1_funct_2 X1 k5_numbers (u1_struct_0 \\ & X0))\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 \\ & X0))))))\wedge(m1_subset_1 X2 k1_numbers)))\Rightarrow((v1_funct_1 (k5_normsp_1 \\ & X0 X1 X2)\wedge((v1_funct_2 (k5_normsp_1 X0 X1 X2) k5_numbers (u1_struct_0 \\ & X0))\wedge(m1_subset_1 (k5_normsp_1 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 \\ & k5_numbers (u1_struct_0 X0)))))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge \\ & (((\neg v2_struct_0 X1)\wedge(l1_rlvect_1 X1))\wedge(((v1_funct_1 X2)\wedge(m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 (u1_struct_0 X1))))))\wedge(m1_subset_1 \\ & X3 k1_numbers))))\Rightarrow((v1_funct_1 (k4_vfunct_1 X0 X1 X2 X3))\wedge(m1_subset_1 \\ & (k4_vfunct_1 X0 X1 X2 X3) (k1_zfmisc_1 (k2_zfmisc_1 X0 (u1_struct_0 \\ & X1)))))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v13_algstr_0 X0)\wedge((v2_rlvect_1 \\ & X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge((v3_normsp_0 X0)\wedge \\ & ((v4_normsp_0 X0)\wedge((v2_clvect_1 X0)\wedge((v3_clvect_1 X0)\wedge((v4_clvect_1 \\ & X0)\wedge((v5_clvect_1 X0)\wedge((v8_clvect_1 X0)\wedge(l2_clvect_1 X0))))))))))\Rightarrow \\ & (\forall X1.((\neg v2_struct_0 X1)\wedge((v13_algstr_0 X1)\wedge((v2_rlvect_1 \\ & X1)\wedge((v3_rlvect_1 X1)\wedge((v4_rlvect_1 X1)\wedge((v5_rlvect_1 X1)\wedge \\ & ((v6_rlvect_1 X1)\wedge((v7_rlvect_1 X1)\wedge((v8_rlvect_1 X1)\wedge((v3_normsp_0 \\ & X1)\wedge((v4_normsp_0 X1)\wedge((v2_normsp_1 X1)\wedge(l1_normsp_1 X1))))))))))\Rightarrow \\ & (\forall X2.((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (u1_struct_0 X0) (u1_struct_0 X1))))))\Rightarrow(\forall X3.(m1_subset_1 \\ & X3 (u1_struct_0 X0))\Rightarrow((r2_ncfcont1 X0 X1 X2 X3)\Leftrightarrow((X3 \in k1_relset_1 \\ & (u1_struct_0 X0) X2)\wedge(\forall X4.((v1_funct_1 X4)\wedge((v1_funct_2 \\ & X4 k5_numbers (u1_struct_0 X0))\wedge(m1_subset_1 X4 (k1_zfmisc_1 \\ & (k2_zfmisc_1 k5_numbers (u1_struct_0 X0))))))\Rightarrow(((r1_tarski \\ & (k2_relset_1 (u1_struct_0 X0) X4) (k1_relset_1 (u1_struct_0 X0) \\ & X2))\wedge((v9_clvect_1 X4 X0)\wedge(k7_clvect_1 X0 X4 = X3)))\Rightarrow((v3_normsp_1 \\ & (k8_funct_2 k5_numbers (u1_struct_0 X1) (u1_struct_0 X0) X4 X2) \\ & X1)\wedge(k7_partfun1 (u1_struct_0 X1) X2 X3 = k6_normsp_1 X1 (k8_funct_2 \\ & k5_numbers (u1_struct_0 X1) (u1_struct_0 X0) X4 X2)))))))))) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((\neg v2_struct_0 X1)\wedge \\ & (l1_rlvect_1 X1))\Rightarrow(\forall X2.((v1_funct_1 X2)\wedge(m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 (u1_struct_0 X1))))))\Rightarrow(\forall X3. \\ & (m1_subset_1 X3 k1_numbers)\Rightarrow(\forall X4.((v1_funct_1 X4)\wedge(m1_subset_1 \\ & X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 (u1_struct_0 X1))))))\Rightarrow((X4 = k4_vfunct_1 \\ & X0 X1 X2 X3)\Leftrightarrow((k1_relset_1 X0 X4 = k1_relset_1 X0 X2)\wedge(\forall X5. \\ & (m1_subset_1 X5 X0)\Rightarrow((X5 \in k1_relset_1 X0 X4)\Rightarrow(k7_partfun1 (u1_struct_0 \\ & X1) X4 X5 = k1_rlvect_1 X1 (k7_partfun1 (u1_struct_0 X1) X2 X5) X3)))))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (17)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v13_algstr_0 X0)\wedge((v2_rlvect_1 \\ & X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge((v3_normsp_0 X0)\wedge \\ & ((v4_normsp_0 X0)\wedge((v2_clvect_1 X0)\wedge((v3_clvect_1 X0)\wedge((v4_clvect_1 \\ & X0)\wedge((v5_clvect_1 X0)\wedge((v8_clvect_1 X0)\wedge(l2_clvect_1 X0))))))))))\Rightarrow \\ & (\forall X1.((\neg v2_struct_0 X1)\wedge((v13_algstr_0 X1)\wedge((v2_rlvect_1 \\ & X1)\wedge((v3_rlvect_1 X1)\wedge((v4_rlvect_1 X1)\wedge((v5_rlvect_1 X1)\wedge \\ & ((v6_rlvect_1 X1)\wedge((v7_rlvect_1 X1)\wedge((v8_rlvect_1 X1)\wedge((v3_normsp_0 \\ & X1)\wedge((v4_normsp_0 X1)\wedge((v2_normsp_1 X1)\wedge(l1_normsp_1 X1))))))))))\Rightarrow \\ & (\forall X2.((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (u1_struct_0 X0) (u1_struct_0 X1))))\Rightarrow(\forall X3.(m1_subset_1 \\ & X3 (u1_struct_0 X0))\Rightarrow(\forall X4.(m1_subset_1 X4 k1_numbers)\Rightarrow \\ & ((r2_ncfcont1 X0 X1 X2 X3)\Rightarrow(r2_ncfcont1 X0 X1 (k4_vfunct_1 (u1_struct_0 \\ & X0) X1 X2 X4) X3)))))) \end{aligned}$$